

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P15698WO		FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/003134	International filing date (day/month/year) 24.03.2004	Priority date (day/month/year) 08.05.2003	
International Patent Classification (IPC) or national classification and IPC			
Applicant SIEMENS AKTIENGESELLSCHAFT			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>2</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-14 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-11 _____ received by this Authority on 21.01.2005 with the letter of 19.01.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/2-2/2 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-11</u>	YES
	Claims	<u>None</u>	NO
Inventive step (IS)	Claims	<u>1-8, 11</u>	YES
	Claims	<u>9, 10</u>	NO
Industrial applicability (IA)	Claims	<u>1-11</u>	YES
	Claims	<u>None</u>	NO

2. Citations and explanations (Rule 70.7)

1. Cited literature

This report refers to the following document:

D2: DE 101 44 384 C (SIEMENS AG), 2 January 2003
(2003-01-02)

2. Document D2 is considered to be the prior art closest to the subject matter of the claim.

2.1 D2 discloses the following (the references in parentheses are to D2):

A component with a functionally configurable logic circuit arrangement (see the abstract and paragraphs [0002] to [0004], [0027], [0028], [0034] and [0035], and figures 1, 3 and 4), comprising a plurality of data lines, to at least some of which is assigned at least one element that can be switched between two states with different discrete resistances (paragraphs [0034] and [0035], and figures 1, 3 and 4), said element releasing or blocking the data line according to

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its switching state; wherein the switching state of the element can be stored in a non-volatile memory and is rapidly switchable (paragraph [0003]), the data line being blocked or released by the element itself (figures 1, 3 and 4).

- 2.2 The subject matter of claim 1 differs from what is known from D2 in that the last feature of claim 1 ("the data line being blocked or released by the element itself") includes an alternative according to which the element effects the blocking and releasing via a pass transistor connected in the data line.
- 2.3 The subject matter of claim 1 is therefore novel (PCT Article 33(2)).
- 2.4 The problem addressed by the present invention can thus be seen as that of how to reduce the voltage drop across the element.
- 2.5 The solution proposed in claim 1 of the application involves an inventive step (PCT Article 33(3)) because the blocking and releasing of a pass transistor connected in a data line is not known from the prior art. In contrast to the prior art, the combination of features specified in claim 1 involves a rapidly switchable data line, the switching state of which can be stored in a non-volatile memory, and which in its released state allows charge to flow through the pass transistor and not through the magnetoresistive element. Hence in the released state the voltage drop across the element is less than in the prior art.

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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2.6 Claims 2 to 8 and 11 are dependent on claim 1 and therefore also meet the PCT requirements in respect of novelty and inventive step.

2.7 Claims 9 and 10 do not contain any features that meet the PCT requirements in respect of novelty or inventive step when combined with the features of any of the back-referenced claims.